



**SAB EPEC Review of the
Ecological Assessment Action Plan
February 22, 2012**

***Integrated Risk Assessment
Approach to Ecological
Assessments***

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Multiple Types of Integration

- Integration of HH and Eco Assessments
 - Facilitated by new HHRA framework
 - Ecosystem Services provide a link
 - Covered in Cumulative Risk framework and guidelines and WHO framework
- Integration across Programs/Media
 - Systems approach
 - Agency is addressing piecemeal
 - Agreement between OW and OPP
 - NOx/SOx assessment addressed water quality
 - ORD is addressing under Sustainability



Integration Across Types of Assessments

- All activities that provide science to directly support decisions are assessments
- Not all assessments are risk assessments
- Non-risk assessors have difficulty adapting
 - No applicable framework
 - ERA framework constrains and confuses
 - May not produce needed results

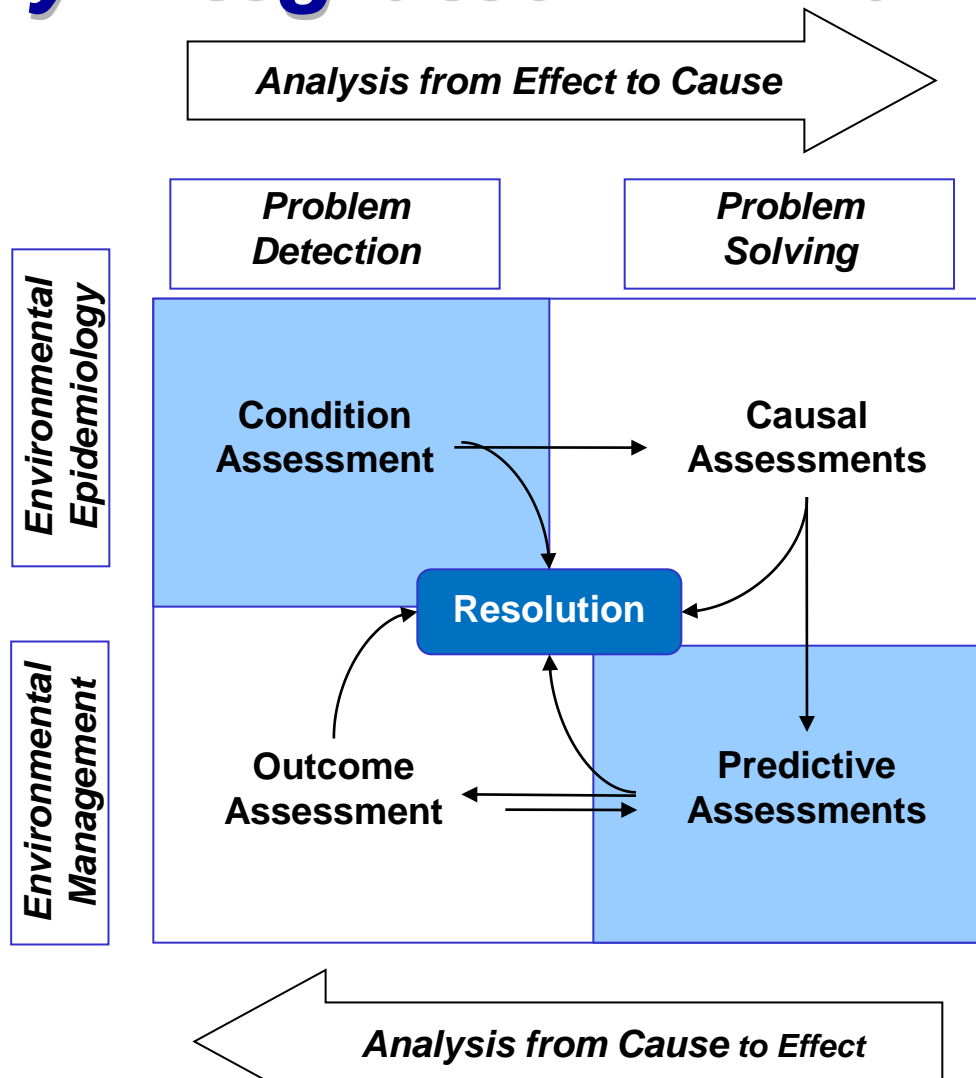


Example: EMAP & Bioassessments

- EMAP developed without an assessment framework or an idea of what decisions would be informed
- Methods adopted for bioassessment in CWA
 - Endpoints, inference structure and decision context unclear
- No connection to causation
- Causal assessment methods developed subsequently (SI Guidance & CADDIS)
 - Necessary information not provided



A Fully Integrated EA Framework





Problem Detection

Problem Solving

*Environmental
Epidemiology*

*Environmental
Management*

Condition Assessment

Chemical

Physical

Biological

Causal Assessment

Cause

Source

**Problem
Resolution**

Risk

Outcome

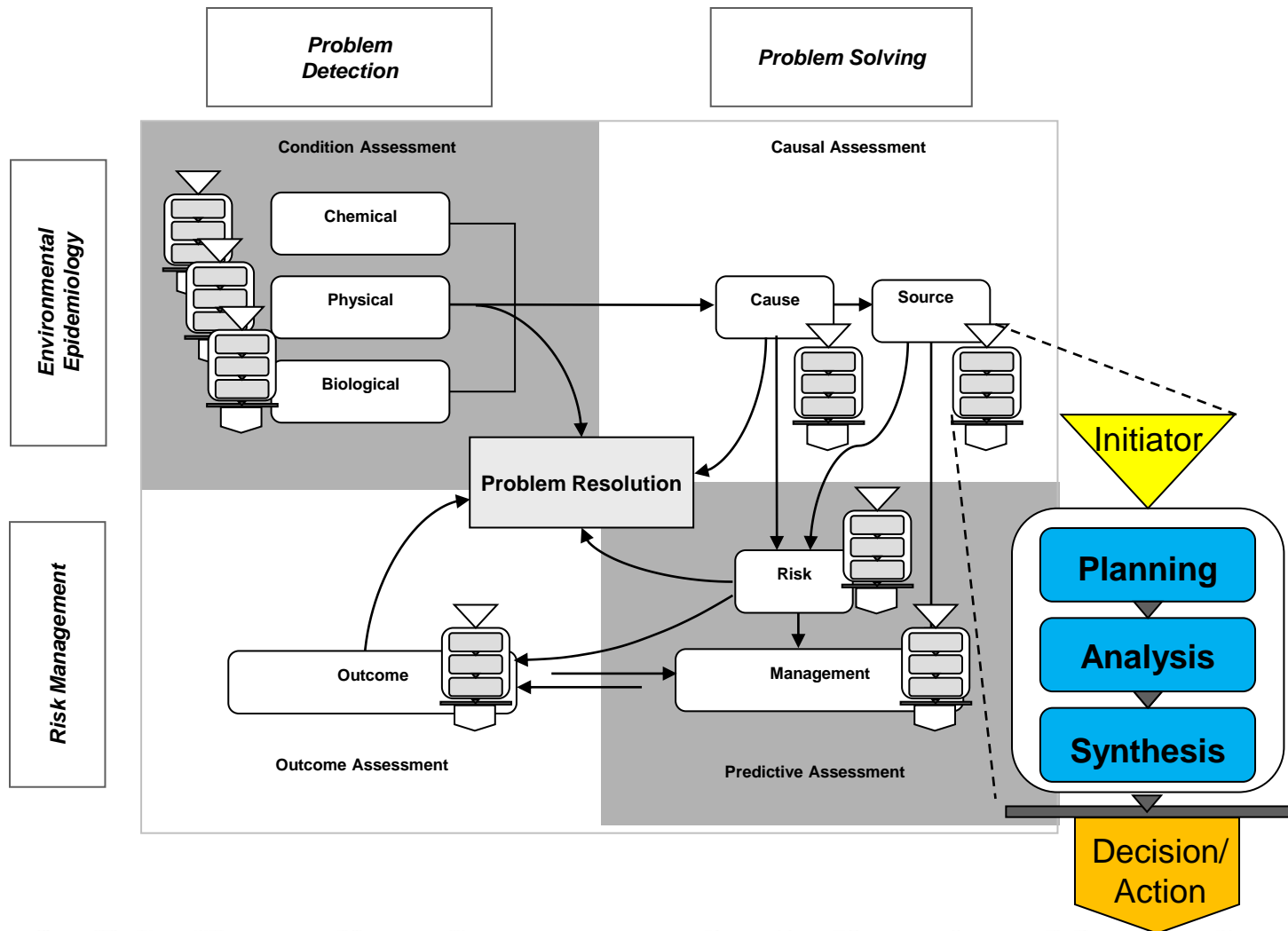
Management

Outcome Assessment

Predictive Assessment



Generic Assessment Framework





Charge Question

Please comment on how guidance for an approach to assessment that integrates different media and endpoints and different types of assessments might contribute to better decision making (e.g., assessment of complex issues, cumulative risks and sustainability).